DN 109:205023
TI **Brain** natriuretic peptide-32: N-terminal six amino acid extended form of **brain** natriuretic peptide identified in porcine **brain**
AU Sudoh, Tetsuji; Minamino, Naoto; Kangawa, Kenji; Matsuo, Hisayuki
CS Dep. Biochem., Miyazaki Med. Coll., Miyazaki, 889-16, Japan
SO Biochem. Biophys. Res. Commun. (1988), 155(2), 726-32
CODEN: BBRCA9; ISSN: 0006-291X
DT Journal
LA English
AB **Brain** natriuretic peptide (BNP) is a newly identified peptide of 26 residues, which has a remarkable homol. to but is distinct from atrial natriuretic peptide. The peptide exerts natriuretic-diuretic activity as well as potent chick rectum relaxant activity. By using RIA specific to BNP and immunoaffinity chromatog., a novel peptide of 32 residues carrying a BNP structure at the C-terminus was isolated from porcine **brain**. The amino acid sequences of this peptide was Ser-Pro-Lys-Thr-Met-Arg-Asp-Ser-Gly-Cys-Phe-Gly-Arg-Arg-Leu-Asp-Arg-Ile-Gly-Ser-Leu-Ser-Gly-Leu-Cly-Cys-Asn-**Val-Leu-Arg**-Arg-Tyr. This peptide is an N-terminal six amino acid extended form of BNP and henceforth is designated BNP-32. BNP and BNP-32 are major forms of the BNP family in porcine **brain**.

DN 102:198396
TI The distribution and chromatographic characterization of an amino-terminal fragment of cholecystokinin (CCK) 58 in rat **brain**
AU Beinfeld, Margery C.
CS Med. Cent., St. Louis Univ., St. Louis, MO, 63104, USA
SO Biochem. Biophys. Res. Commun. (1985), 127(3), 720-5
CODEN: BBRCA9; ISSN: 0006-291X
DT Journal
LA English
AB Rat **brain** exts. contained a peptide which cross-reacted with an antiserum to Leu-Arg-Ala-**Val**-**Leu**-**Arg**-Pro-Asp [96381-43-0], an amino-terminal fragment of cholecystokinin-58. The peptide was distributed in all rat **brain** regions contg. cholecystokinin octapeptide, and was most abundant in areas where cholecystokinin terminals predominate (septum, striatum, and olfactory tubercle/nucleus accumbens). Based on its mol. wt. (1750 daltons) it is probably that the portion of cholecystokinin-58 left when cholecystokinin-39 is cleaved. It may represent an intermediate in the processing of pre-pro-cholecystokinin. The presence of this peptide in the cholecystokinin terminal areas implies that the proteolytic cleavage of cholecystokinin-58 occurs late in the processing, possibly in synaptic vesicles. It may be released with cholecystokinin octapeptide and exert an influence on synaptic transmission.

TI Genetic background for multiple messengers
AU Bloom, Floyd E.
CS Div. Preclin. Neurosc. Endocrinol., Scripps Clin. Res. Found., La Jolla, CA, 92037, USA
SO Prog. Brain Res. (1986), 68(Coexistence Neuronal Messengers: New Princ. Chem. Transm.), 149-59
CODEN: PBRRA4; ISSN: 0079-6123
DT Journal; General Review
LA English
AB A review, with 13 refs., on the use of mol. cloning techniques to discover new neurotransmitters, with emphasis on the author's recent discovery of a small, brain-specific, highly repetitive RNA. This RNA, of .apprx.160 nucleotides, is present at .apprx.100,000 copies in the rat genome and is thought to be an identifier sequence. Biochem. and immunocytochem. studies

09/228866

DN 104:49095
TI Rat brain specific protein 1B236: molecular forms and regional distribution
AU Malfroy, B.; Bakhit, C.; Lenoir, D.; Bloom, F. E.; Milner, R. J.
CS Res. Inst., Scripps Clin., La Jolla, CA, 92037, USA
SO INSERM Symp. (1985), 25(Regul. Pept. Dig., Nerv. Endocr. Syst.), 213-16
CODEN: INSSDM; ISSN: 0378-0546
DT Journal
LA English
AB The brain-specific polypeptide 1B236 exists as high-mol.-wt. membrane-bound and sol. forms, as well as P5-like and P7-like low-mol.-wt. forms, which are heterogeneously distributed in rat brain. The multiplicity of 1B236 mol. forms indicates that this mol. undergoes extensive posttranslational processing to generate a family of previously undisclosed **brain-specific peptides**.

TI Synthetic polypeptides corresponding to portions of proteinoids translated from brain-specific mRNAs, receptors, methods and diagnostics using them

IN Sutcliffe, J. Gregor

PA Scripps Clinic and Research Foundation, USA

SO Eur. Pat. Appl., 93 pp.
CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 135277	A1	19850327	EP 84-304747	19840711
	EP 135277	B1	19861029		
	R: AT, BE, CH, DE, FR, GB, IT, LI, NL				
	AT 23169	E	19861115	AT 84-304747	19840711
	AU 8430813	A1	19850124	AU 84-30813	19840718
	AU 576508	B2	19880901		
	ES 534510	A1	19850916	ES 84-534510	19840720
	JP 60190796	A2	19850928	JP 84-151146	19840720
	CA 1247521	A1	19881227	CA 84-459320	19840720
	US 4900811	A	19900213	US 87-58620	19870603
	US 5242798	A	19930907	US 90-476961	19900207
PRAI	US 83-516136	19830721			
	EP 84-304747	19840711			
	US 87-58620	19870603			

AB Synthetic polypeptides with amino acid sequences that correspond to portions of brain-specific proteins were synthesized. Antibodies to and diagnostics that utilize these polypeptides are prepd. Thus, cDNA to rat brain total mRNA was prepd. Northern blot anal. of rat brain, liver, and kidney mRNA was used to identify the brain-specific cDNA. The nucleotide sequences of several of the brain-specific cDNAs were detd. and the coding regions were scanned for charged regions in the vicinity of proline residues. Corresponding polypeptides were synthesized and were coupled to 3 carriers: keyhole limpet hemocyanin, edestin, and thyroglobulin. The resulting conjugates were used to immunize rabbits. The antibodies isolated from the immunized rabbits were used to det. the location of the proteins in the brain by incubating 60 .mu.m thick sections of brain tissue with appropriate dilns. of an antibody. The sections were then incubated with goat anti-rabbit IgG conjugated to horseradish peroxidase. The antibodies could also be used in a diagnostic system to det. the presence of specific brain proteins.

DN 108:69725
TI Introduction of foreign genes into nervous tissue cells and its expression
AU Mikoshiba, Katsuhiko; Okano, Hideyuki
CS Inst. Protein Res., Osaka Univ., Suita, 565, Japan
SO Taisha (1987), 24(12), 1079-86
CODEN: TSHAAW; ISSN: 0372-1566
DT Journal; General Review
LA Japanese
AB A review with 36 refs. Expression of human and mouse Thy1 antigen genes in various tissues of transgenic mice and normal tissues are compared. The gene expression in brain and other tissues of transgenic mice is shown by using a metallothionein gene fused with a rat preprosomatostatin gene, human growth hormone gene, calcitonin-related peptide gene, rat growth hormone gene, or human hypoxanthine-guanine phosphoribosyltransferase cDNA. ID (identifier) sequences of genes coding for **brain-specific peptides** act as cis-acting pos. regulators for tissue-specific RNA polymerase II. An ID-like sequence exists in the enhancer region of JC virus, which causes progressive multifocal leukoencephalopathy. The early genes of JC virus express strongly in the brain of transgenic mice. The SV40 virus large T antigen gene causes brain choroidea papilloma. The product of the ras gene possesses nerve growth factor-like activity in PC12, a rat pheochromocytoma.

L9 ANSWER 2 OF 2 CAPLUS COPYRIGHT 1999 ACS
AN 1983:433438 CAPLUS
DN 99:33438
TI Autoradiographic localization of cholecystokinin **receptors** in rodent **brain**
AU Zarbin, M. A.; Innis, R. B.; Wamsley, J. K.; Snyder, S. H.; Kuhar, M. J.
CS Sch. Med., Johns Hopkins Univ., Baltimore, MD, 21205, USA
SO J. Neurosci. (1983), 3(4), 877-906
CODEN: JNRSDS; ISSN: 0270-6474
DT Journal
LA English
AB Cholecystokinin (**CCK**) [9011-97-6] receptor binding sites were localized by autoradiog. in the guinea pig and rat central nervous system.

The 125I-labeled **CCK**-triacontatriapeptide (**CCK**-33) [67256-27-3] labeled the sites in brain slices with an obsd. assocn. const. equal to 0.041/min and a dissocn. const. equal to 0.008/min. **CCK**-33 and the C-terminal octapeptide of **CCK**-33 (**CCK**-8) [25126-32-3] potently inhibited 125I-**CCK**-33 binding with Ki's of 2 nM, whereas desulfated **CCK**-8 [25679-24-7] and the C-terminal tetrapeptide of **CCK**-33 [1947-37-1] were much weaker. Receptors were concd. in the olfactory bulb, in the superficial laminae of the primary olfactory cortex, in the deep laminae of the cerebral cortex, and in the pretectal area. Substantial nos. of sites were also found in the basal ganglia, in the amygdala, and in the hippocampal formation. 125I-**CCK**-33 binding sites appear to be located on fibers of the optic tract and probably on olfactory tract fibers as well. These results are discussed in terms of physiol. functions assocd. with **CCK**, presynaptic receptors, and

DN 99251483
TI Identification of receptor ligands with phage display peptide libraries.
AU Koivunen E; Arap W; Rajotte D; Lahdenranta J; Pasqualini R
CS Department of Biosciences, University of Helsinki, Viikinkaari, Finland.
NC CA 30199 (NCI)
SO JOURNAL OF NUCLEAR MEDICINE, (1999 May) 40 (5) 883-8. Ref: 66
Journal code: JEC. ISSN: 0161-5505.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals; Cancer Journals
EM 199908
EW 19990802
AB With the development and maturation of the technology of displaying peptides on bacteriophage, it has become possible to isolate peptide ligands to various targets. In the phage display strategy, up to 10(9) peptides of different permutations are expressed on the surface of filamentous phage. Thus, peptides capable of binding target molecules in vitro and even target tissues in vivo can be identified. In recent years, a series of libraries that display degenerate peptides of different lengths have been constructed, and specific ligands to cell surface receptors, such as integrins, have been isolated. In the in **vivo** biopanning, **peptides** targeting distinct organs or tumors have been rescued after intravenous administration of **phage libraries** into mice. In one application, the isolated **peptide** ligands have been used to direct a cytotoxic drug to tumor vasculature in mice. Further applications in radioimaging and radiotherapy
are be

L12 ANSWER 2 OF 4 MEDLINE
AN 1998092520 MEDLINE
DN 98092520
TI Cancer treatment by targeted drug delivery to tumor vasculature in a mouse
model [see comments].
CM Comment in: Science 1998 Jan 16;279(5349):323-4
AU Arap W; Pasqualini R; Ruoslahti E
CS Cancer Research Center, The Burnham Institute, 10901 North Torrey Pines Road, La Jolla, CA 92037, USA.
NC CA74238-01 (NCI)
CA62042 (NCI)
CA30199 (NCI)
SO SCIENCE, (1998 Jan 16) 279 (5349) 377-80.
Journal code: UJ7. ISSN: 0036-8075.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 199804
EW 19980401
AB In vivo selection of **phage** display **libraries** was used to isolate **peptides** that **home** specifically to tumor blood vessels. When coupled to the anticancer drug doxorubicin, two of these peptides-one containing an alphav integrin-binding Arg-Gly-Asp motif and the other an Asn-Gly-Arg motif-enhanced the efficacy of the drug against human breast cancer xenografts in nude mice and also reduced its toxicity. These results indicate that it may be possible to develop targeted chemotherapy strategies that are based on selective expression of

L15 ANSWER 7 OF 15 MEDLINE
AN 1999219474 MEDLINE
DN 99219474
TI Elucidation of muscle-binding peptides by phage display screening.
AU Samoylova T I; Smith B F
CS Scott-Ritchey Research Center, College of Veterinary Medicine, Auburn University, Alabama 36849, USA.
SO MUSCLE AND NERVE, (1999 Apr) 22 (4) 460-6.
Journal code: NN9. ISSN: 0148-639X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199907
EW 19990702
AB Muscle makes up the largest tissue volume of the body, yet its size makes muscle-specific therapy difficult. This becomes particularly relevant when approaches to gene therapy for inherited myopathies are evaluated. Thus, a mechanism to target constructs or pharmaceuticals to muscle following intravenous injection would be advantageous. By screening a random phage display **library** we have identified a heptapeptide sequence, ASSLNIA, with enhanced in **vivo** skeletal and cardiac muscle binding. **Phage** carrying this **peptide** showed a 9- to 20-fold (depending on control tissue) increase in muscle selectivity compared with **phage** with no insert. When the injected individual phage clone was localized by immunohistochemistry, it was found within focal areas of the membrane of myofibers. Thus, the peptide identified represents a ligand that is capable of accessing skeletal and cardiac muscle from the lumen of blood vessels and could therefore readily be